

**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**Claims 6-12 are canceled.**

**The claims are amended as follows:**

13. (Amended) A ~~the~~carbon fiber~~s~~ ~~as claimed in claim 11,~~ obtained by a high-temperature treatment method for carbon fiber which has been produced through thermal decomposition reaction of a carbon source and a transition metal catalyst, serving as main raw materials, which method comprises vaporizing an impurity contained in the carbon fiber, and discharging the impurity through a high-temperature section of a heat treatment furnace while being accompanied by a carrier gas, wherein the obtained carbon fiber comprises~~comprising~~ about 100 ppm or less of a metal element selected form the group consisting of Fe, Ni, Co, Cu, Mo, Ti, V and Pd.

14. (Amended) A ~~the~~carbon fiber ~~as claimed in claim 12~~obtained by a method for producing carbon fiber, said method comprising a step of carrying out a thermal decomposition reaction of a carbon source and a transition metal catalyst, serving as main raw materials, and a step of heat treating the thermal decomposition, wherein said step of heat treating comprises a high-temperature heat treatment method for carbon fiber which has been produced through thermal decomposition reaction of a carbon source and a transition metal catalyst, serving as main raw materials, which heat treatment method comprises vaporizing an impurity through a high-temperature section of a heat treatment furnace while being accompanied by a carrier gas,

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wherein the obtained carbon fiber comprises ~~comprising~~ about 100 ppm or less a metal element selected from the group consisting of Fe, Ni, Co, Cu, Mo, Ti, V and Pd.

**Claims 15-16 are added as new claims.**